



Lab grants Decision Sciences Corporation exclusive commercial license for muon tomography

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LOS ALAMOS, New Mexico, October 7, 2008—Los Alamos National Laboratory has granted Decision Sciences Corporation (DSC) an exclusive worldwide license to commercialize muon tomography, a LANL-developed technology.

Muon tomography uses naturally occurring cosmic-ray muons, a type of subatomic particle, to detect and identify concealed nuclear threat materials based on their atomic number and density. Unlike other imaging and detection techniques, such as X-rays, muon tomography cannot be fooled by threat materials that have been shielded because the dense shielding material is itself detected. Using advanced software to image data collected in a muon tomography scanner, the system also generates a three-dimensional image map indicating a threat object's precise location.

Building on Los Alamos National Laboratory's pioneering work with muon tomography, DSC and the Laboratory have collaborated to create a unique cargo-scanning technology that will safely and accurately detect bare, shielded, and masked nuclear threat materials. The system harnesses muon tomography to provide vital security information without exposing system operators, bystanders, or the objects examined to dangerous radiation.

"This is a perfect example of the Lab's technology-transfer mission. Through the collaboration with DSC, Los Alamos has taken a compelling technology from scientific theory to practice, and has found the right partner to transform this technology into a vital commercial product that is urgently needed in the marketplace," said Christopher Morris, principal inventor for muon tomography at LANL. "The Los Alamos and DSC teams have worked closely over the last two years and achieved huge technical advances in the development of the muon tomography technology. We're pleased to see this technology reach the marketplace through successful commercialization."

The collaboration with DSC has been instrumental in moving the technology from the laboratory to practical application in a relatively short amount of time, according to Erica Sullivan, the Laboratory's technology transfer liaison for the muon tomography project. "The Lab's expertise in cutting-edge fundamental science combined with DSC's product-driven corporate culture has resulted in the rapid development of a complete scanner system, which DSC has dubbed "Guardian MT™", that will benefit the nation as a whole," said Sullivan.

Steven Oesterle, president and chief executive officer of DSC, said that, because Los Alamos has a rich history in technology development and is one of the premier global research institutions in the nuclear field, the company has been honored to work closely with Morris and the entire Laboratory team in the development of this critical technology.

"This license opens the door for us to pursue multiple applications of this transformational technology," added Michael Sossong, principal inventor of the technology, formerly with Los Alamos National Laboratory and currently director of nuclear research at DSC. "As the lead scientist with responsibility for the continued development of this technology leading to widespread commercialization, I feel a tremendous obligation to accelerate its deployment to increase the security worldwide."

For more information about the commercialization of muon tomography, contact Erica Sullivan at 505-667-9219, or eab@lanl.gov.

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